NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE
San Bernardino, CA

EXPLANATION OF SIGNIFICANT DIFFERENCES

to 1993 and 1995 Interim Records of Decision:
Newmark and Muscoy Operable Units

2004

1. INTRODUCTION

In September 1993 and 1995, the United States Environmental Protection Agency ("EPA") issued two Interim Records of Decision ("RODs") addressing contamination at two groundwater operable units ("OU") of the Newmark Groundwater Contamination Superfund Site in the City of San Bernardino, California ("the City"). The Newmark ROD, executed on August 4, 1993, requires extraction of contaminated groundwater from the Newmark OU, treatment of the contaminated groundwater to meet the ROD treatment goals, and delivery of the treated groundwater to the City for distribution to the public through its potable water supply system, or the water will be recharged to the aquifer. The Muscoy ROD, which set similar requirements, was executed on March 24, 1995.

EPA is issuing this Explanation of Significant Differences ("ESD") to provide notice of modifications to the 1993 and 1995 Interim RODs, which do not fundamentally affect the selected interim remedial actions. The purpose of the ESD is to supplement the existing RODs with an Institutional Control ("IC") program to assure that the Newmark and Muscoy extraction and treatment systems remain effective in meeting the objectives of capturing contaminated groundwater and inhibiting the migration of groundwater contamination into clean portions of the aquifer. The ICs to be implemented under this ESD are to protect and enhance the barrier

well system established pursuant to the Newmark and Muscoy RODs, and are an essential and integral component of the interim remedies for the Newmark and Muscoy OUs. The ESD requires a groundwater management program mandating that the installation of new wells, or operation of spreading basins that might impact the barrier wells, be conducted pursuant to a permit or other control mechanism. In settlement negotiations with the City, which accepts the treated water from both OUs into its potable water supply, the City has offered to adopt an ordinance or other groundwater management plan that will implement the requirements of this ESD within the City limits.

EPA is issuing this Explanation of Significant Differences to satisfy its responsibilities under CERCLA Section 117(c) and NCP Section 300.435(c)(2)(i). This ESD and any comments regarding this ESD will become part of the Administrative Record for this site pursuant to NCP Section 300.825(a)(2). Copies of the Administrative Record are available for review at the following locations:

The San Bernardino County Public Library
104 W. Fourth Street
San Bernardino, CA 92415
(909) 387-5718

San Bernardino Valley Municipal Water District Office
1350 S. "E" Street
San Bernardino, CA 92412
(909) 387-9211

EPA Region 9 Superfund Records Center
95 Hawthorne Street - Suite 403S
San Francisco, California 94105
(415) 536-2000

If additional information becomes available, EPA will revise the Administrative Record to reflect such material.

II BACKGROUND

The Newmark Groundwater Contamination Superfund Site includes three OUs: the Newmark and Muscoy OUs are located within the San Bernardino portion of the Bunker Hill Basin, near the Shandin Hills, and the Source OU is generally located in the area northwest of the Shandin Hills (see site map in Figure 1, page 9). The Newmark Groundwater Contamination Superfund Site covers approximately eight square miles of groundwater contaminated with volatile organic compounds ("VOCs"), including perchloroethylene ("PCE") and trichloroethylene ("TCE"). These chemicals are industrial solvents that have been commonly used for a variety of purposes including dry cleaning, metal plating and machinery degreasing.

The following provides a brief background of the Newmark Groundwater Contamination Superfund Site and the 1993 and 1995 Interim RODs. Additional background information can be found in the 1993 and 1995 Interim RODs and corresponding Administrative Records.

B. Site Background and Description

In the 1980's, the State of California sampled water produced from certain City wells and detected contamination from VOCs, including PCE and TCE, freon, decomposition byproducts from those compounds, and other contaminants. The State investigations were published in 1986 and 1989, and identified the Newmark and Muscoy contamination plumes.

The California Department of Toxic Substances Control ("DTSC") and the Santa Ana Regional Water Quality Control Board ("RWQCB") found that the Newmark and Muscoy plumes constituted an ongoing release of hazardous substances and an emergency threatening

public health and the environment. DTSC made these findings in a determination issued by DTSC during the 1980's, pursuant to California law.

On October 30, 1986, DTSC contracted with the City to construct, operate and maintain four treatment systems consisting of air stripping and liquid granular activated carbon units located at the Newmark wellfield and elsewhere, and DTSC and its assigned remedial project manager directed and oversaw the City's work on the design, construction, operation and maintenance of those treatment systems. DTSC paid for the design and construction of these four treatment systems and appurtenant facilities at the Newmark wellfield. The City has paid for, and continues to pay for, the operation and maintenance of these treatment systems, and the City paid for and constructed appurtenant storage and distribution facilities needed to accommodate these treatment systems.

EPA placed the Newmark Groundwater Contamination Superfund Site on the National Priorities List ("NPL") in March 1989. In 1990, EPA began the Remedial Investigation ("RI") and the Feasibility Study ("FS") of the Newmark OU. For the Newmark RI, monitoring wells were drilled and sampled in the Newmark OU, and nearby City and State wells were also sampled by EPA. PCE and TCE were found in all of the affected wells. The FS evaluated a range of cleanup alternatives for addressing the five-mile long groundwater contamination plume. The RI/FS report for the Newmark OU was finalized in March 1993.

On August 4, 1993, EPA issued a ROD that identified the methods that EPA would use to contain and clean up the Newmark OU groundwater contamination. The remedy for the Newmark plume is an interim remedial action which addresses the potential public health threats from the groundwater contamination. It consists of the following features: (1) groundwater

extraction (pumping) and treatment facilities at two locations in the aquifer (the North and South Areas); (2) removal of contaminants from groundwater using liquid phase granular activated carbon filtration; and (3) the final use of treated water. Construction of the Newmark OU extraction and treatment system was completed in October, 1998, and was determined to be operational and functional in October 2000.

Additional investigation in the summer of 1992 traced the direction of the groundwater contamination flow into the western side of the Shandin Hills. Based on this information, the Newmark Groundwater Contamination Superfund Site was officially expanded in September 1992 to include the Muscoy groundwater plume, located west of the Shandin Hills, as the Muscoy OU .

EPA completed the RI/FS of possible treatment alternatives for the Muscoy groundwater contamination, and the RI/FS report for the Muscoy OU was issued in December 1994. The Muscoy OU ROD was signed on March 24, 1995. The ROD for the Muscoy groundwater contamination selects an interim remedial action focusing on preventing contamination from spreading to clean parts of the aquifer south and west of the Shandin Hills. Much of the analysis for selecting a cleanup plan for the Newmark groundwater contamination was directly applicable to the Muscoy plume. Construction of the Muscoy OU extraction and treatment system is anticipated to be completed in 2004, and the performance evaluation of the system is anticipated to be completed in 2005.

The U.S. EPA's primary objective for the 1993 and 1995 Interim RODs for the Newmark and Muscoy OUs is to withdraw, treat and dispose of contaminated groundwater, and inhibit any further spread of contamination to clean areas of the aquifer. This is being

accomplished for the Newmark and Muscoy OUs by the completion of the construction and operation of the water treatment plants and the barrier wells located along 11th and 14th Streets in San Bernardino, which are expected to remove 21,000 pounds of contaminants over the next 50 years.

The Source OU RI/FS is still being conducted with the participation of the United States Army Corps of Engineers. A ROD for the Source OU will be issued after completion of the RI/FS.

III. DESCRIPTION OF ESD

This ESD includes a modification to both the 1993 and 1995 Interim RODs for the Newmark and Muscoy OUs to require ICs within the City limits as a long term groundwater management strategy to protect the interim remedies, and to address exposure to hazardous wastes and constituents. The ICs to be imposed pursuant to the ESD are to protect the function and effectiveness of the barrier well system established pursuant to the Newmark and Muscoy RODs, and are an essential and integral component of the long term management of the interim remedies for the Newmark and Muscoy OUs. This ESD requires the implementation of a groundwater management program that will control and monitor the ability of users to extract or spread water in the area of influence to the barrier well system, to prevent interference by such extraction or spreading with the effectiveness of the barrier well system. In accordance with the ESD, the City has indicated that it will adopt an ordinance or otherwise implement a management program mandating that the installation of new wells, re-equipping of existing wells, expansion of capacity or rate of production of existing wells, or the use of spreading basins that might impact the barrier wells be conducted only pursuant to a permit, and that the applicant

for any such permit demonstrate that its operations will not detrimentally impact the remedy.

IV. SUPPORT AGENCY COMMENTS

EPA has provided State and Municipal Agencies (including DTSC, and the City of San Bernardino) an opportunity to review and comment on these changes to the 1993 and 1995 RODs. Both DTSC and the City agree that the ICs described in this ESD are appropriate.

V. STATUTORY DETERMINATIONS

This ESD requires an institutional control program to support the interim remedial actions, which affects the scope of the two Interim RODs by adding an additional protective measure to the interim remedial actions, and is significant. Because the institutional control program does not otherwise affect the scope, performance or cost of the selected interim remedial actions, the change is not fundamental. The selected interim remedial actions in the two Interim RODs remain otherwise unchanged, and will continue to meet all Applicable or Relevant and Appropriate Requirements ("ARARs") described in the Interim RODs and to be protective of human health and the environment. The interim remedial actions will continue to be cost effective.

VI. PUBLIC PARTICIPATION ACTIVITIES

Pursuant to 40 C.F.R. § 300.435(c)(2)(i), a formal public comment period is not required for an ESD to a ROD when the difference does not fundamentally alter the interim remedial actions with respect to scope, performance or cost. This ESD does not propose a fundamental change to the interim remedies in the 1993 and 1995 Interim RODs with respect to scope, performance or cost, and therefore, no formal public comment period is required. Nonetheless, EPA will make this ESD and supporting information available for public review and comment

through the Administrative Record and information repository for the Newmark Groundwater Contamination Superfund Site.

Additionally, EPA will publish in the following San Bernardino County newspapers of general circulation a notice that briefly summarizes the ESD, including the reasons for such differences, and that announces its availability for public review and comment: The Sun, The Press Enterprise, Black Voice, El Chicano, Precinct Reporter and Westside Story Newspaper. The comment period will close forty-five (45) days after publication. Thereafter, EPA will consider the comments and will determine whether any revisions to the ESD are needed.

Elizabeth Adams, Chief
Superfund Site Cleanup Branch
EPA Region 9

August 9, 2004
Date

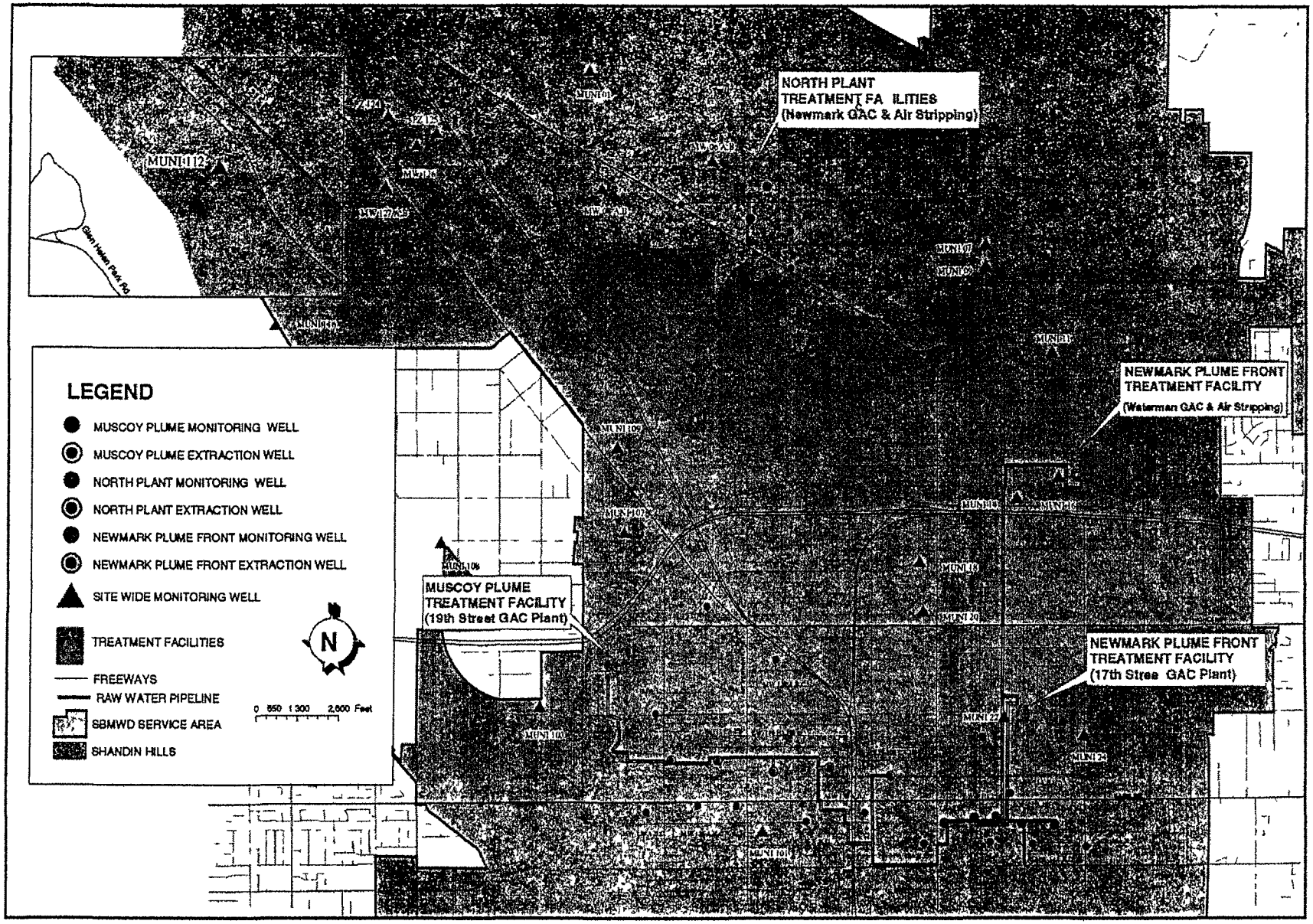

Figure 1: Newmark Groundwater Superfund Site
Extraction wells, Monitoring wells and Treatment Facilities for the Newmark and Muscoy OUs